12

✓ But again – The diseases of the same systems differ materially in their degrees. E.g: There is a febris & febricula – There is Rheumatismus & Rheumaticula in the Arte. Pneumony & Pneumonicula – or acute & chronic Delirium. System – There is involuntary motion, and in its direction motion ~~ty~~ is contrary, only to the will – There is Dysentaria & Dysenticula in the Alimentary canal – There is Hepatitis acuta and chronica – There is Lues & gonorrhoea in the Lymphatic system & There are the ~~intern~~ external & internal measles – & so on in all the other Systems. In each of these, the disease is limited so closely to the system affected, & acts on it so feebly, as ~~to allow~~ not to confine the patient to his bed.

Lastly – Diseases exist in one part of the same system, and produce this symptoms & Rheumatism. I have seen abscess in lungs only in each other system & returns ~~only~~ in another. The debility ~~of extremes~~ is seated in the part, & yet it appears first in the

& yet keeps within the limits of the dominion formerly assigned to them.

3 The Diseases of the Stomach & bowels often exchange situations.

4 The affections of the Skin particularly Sores - and tetters of all kind ~~are old~~ frequently appear in different Seasons in diff.t parts of the body. —

5 ~~The~~ most of the diseases of the Glands are disposed frequently to change their places, more especially Dropsies.

The diseases of the two last systems which I have described, ~~have~~ afford no instances of metastasis such as have been mentioned. V

With this we finish the general

neck. Breath lungs excite a ~~Cough~~ vomiting ~~or~~ a
a weak stomach a Cough —
~~[illegible]~~ — and a Stone in one kidney has in
one instance produced pain only in the
other.

diseases. I have done little more than named them. But I have ~~delivered~~ said into to open a new field of observation to your attention. The more you view general diseases thro' the medium of the systems which I have enumerated, the more definite & precise will be your ideas of them. Endeavour to find out new relationships between them either between different systems, or remote ~~foreign, or~~ parts of the same system. One great advantage will arise from encreasing this species of knowledge - it will lead to the more certain & successful use of many Remedies - for they act as certainly on specific systems, as those systems act on each other. ~~It~~ From a

 the remote & proximate
causes of what has been said of general
diseases — I presume no one will now
deny the truth of ~~the following~~ the leading propo=
=sitions. ~~1 That~~ of our pathology.

1 That debility is the universally predis=
=posing cause of all general diseases.

2 That ~~increase~~ increased or morbid
excitability is the universal effect (when
recent) of ~~the~~ previous debility.

3 That irregular ~~or complicated~~ ~~or absent~~ ~~or defective~~ ~~or~~ or in other
words, a want of order in animal motions ~~is~~
as to ~~force~~ time & place, constitutes
~~exclusively called~~ the proximate cause of all the general
diseases of the sentient & irritable parts
of the body.

4 That the great secret of medicine, ~~and~~
~~the first~~ consists in the knowledge

V 5 That the multiplication of diseases wch are the effects of one or at most, of two original causes resembles ~~is~~ Polytheism in ~~medicine~~ religion. The physician who considers every different affection of the different systems, or ~~diffe~~ every affection of different parts of the same system, as a distinct disease, resembles the Indian, or the new negro who considers water - Dew - Ice - Snow - and frost as distinct species, while the physician who considers disease as an excited ~~a~~ state of part of the system only; and as derived from only One cause, viz: debility, resembles the philosophes who considers ~~fire~~ dew - ~~ice~~ water - from & frost as different states of water, only and as ~~all~~ derived from one cause viz: the absence of Heat.

Having finished Genl diseases, I should

System in which is of the ~~force~~ affected, — of the force, or degrees ~~successive and different~~ of ~~irregular~~ ~~morbid~~ action in it — and the choice of the remedy suited to the System which afterwards is — the exact accommodation is affected & in of ~~remedy~~ the ~~remedy~~ force of that remedy, to ~~that action~~ the degree of morbid action.

Lect: Feb: 28. 1793.

We come now to speak of the ~~particular~~ causes of partial or local dis-
-eases. —

The first thing which strikes the eye of a Physician in contemplating the human ~~body~~ body, is the variety in the color & features which is observable among the different nations wch inhabit our globe. This variety must be the effect of Disease, for there can be no doubt but the whole human race must have been derived from one pair, &

proceed to treat of this general consequences viz:
disorders. I say general consequences, for there
may be disorder in a part which has not
been preceded by Disease or morbid excitement.
There is likewise frequently a mixture of
disease & disorder in the same part as inflam.n
& Suppuration or fibrous in the lives ~~[illegible]~~ &c
morbid excitement & inflam.n 2d & hemorrhage.
The usual consequence of morbid excitement
or disease are 1 Inf.n or effusion & circulation of red & colorless
into serous vessels - 2 hemorrhage ~~or rupture~~ bitrachia 3 Effusion
& stagnation of Serum - ~~or~~ Coagulable - and
red Blood - first ends in resolution 2 & 3d in
Suppuration - all 3 in congestion like Gangrene.
& Gangrene - or loss of power of emitting life
from great force of action in any part. These
are the acute effects of disease. Chronic effects are
tubercles - fibrous & fibrous of all kind - Cancers
Induration & calcareous
matter - dropsical swellings - ~~[illegible]~~ &c many
of them are not preceded by morbid action.

this pair must of course been only of one of those colors. — The original color it has been supposed was the Olive — all the others are deviations from it produced by accidental circumstances ~~to be mentioned hereafter~~ which are fully enumerated by Dr Smith in his learned & ingenious essay upon this subject. The ~~four~~ principal causes of the variety of color and feature in the human body mentioned by Dr Smith are 1 Climate - 2 Diet - 3 state of society, and 4 Disease. I fully adopt the Dr's reasonings upon the physical influence of each of ~~these~~ these causes on the skin and face, and will add further ~~that the~~ in

favor of that work, that it has always appeared to me to be one of the most acute and profound essays that ~~has~~ I have ever met with upon a medical subject. Perhaps it is the letter from the Dr. ~~was being misled by~~ ignorance of any theories of medicine, some one of which perhaps might have misled him from the truth wh. conducted him with so much tact & honor to the end of his inquiries.

Ingenious as this work is - it has not solved all the difficulties upon the subject of the variety of colors & features of the human race - altho it has laid a solid foundation for its being done by others. ~~people~~. — If the ~~color of~~ variety of

color & features be produced by the causes which have been mentioned, it has been asked why they not ~~[illegible]~~ disappear as soon as the above causes have ceased to operate. This is so far from being the case, that a negro retains his color for a century after being rescued from the heat of the sun - from unwholsome diet - from savage society and from the diseases which have been supposed to be most instrumental in producing his ~~dim~~ black color. - To this remark there is a small ~~[illegible]~~ exception, for - a considerable shade of the black color always dis-appears ~~under the blows change of~~

~~circumstances~~ in two or three generations, and the features seldom fail of becoming regular in the 3rd generation under the above change of circumstances.

To account then for the duration of a preternatural color in the skin after the causes which induced it cease to ope=rate, I need only remind you of a fact mentioned formerly, & that is the ~~is a change in the color of~~ the qualities of the skin are the most transmissible to posterity of any peculiarity of the body, and the least liable to be affected by time or external cir==cumstances. —

V as well as in the state of horticulture
- agriculture - building, & clothing, by
which ~~so~~ the great fources of marsh
& human miasmata were dried up.

But the deep black color and the big lips and the flat nose - and the wooly head of the negro, require a specific theory to explain them. I shall offer one in which I hope will be satisfactory.

I formerly took notice of the influence of diet, manners & the state of society in producing diseases of the skin, and ascribed the decay of Elephantiasis - & leprosy to the change in the diet, and employments of mankind by the revival of letters & the change in the political state of ~~the world~~ Europe in the 14 & 15th Centuries. During the prevalence & the prevalence of unwholsome diet - savage manners,

probably by a translation of morbid and
action, & an effusion of morbid humors in the skin
~~deposition~~ of black bile to the rete
mucosum, for the bile ~~of~~ it is well
known sometimes imparts a black color
to the blood, ~~and~~ in bilious fevers, also to the whole skin
in ~~this~~ a disease which is known by
the name of the black Jaundice: from this

co

a bilious disease among a people who inhabit a hot country, it is easy to conceive that a disease may have been induced ~~upon the skin~~ which we call the leprosy, by an acme of a meta=stasis formerly ~~hinted~~ at, and when once produced in a few families might have spread over a considerable part of the globe. — To this leprosy - I ascribe the color of the negroes. my reasons for this opinion are as follow.

The leprosy is accompanied ~~I think the~~ ~~it imparts~~ in some in=stances with a black color ~~to~~ of the skin. of this I have lately met with a most satisfactory proof in Dr Thing's treatment of the diseases of Asia

in Spain. I shall give you a translation of his own words upon this subject. "There are says he above 20 hospitals for Lepers in this province — and I have observed six species of the disorder. The 2nd species is called the black Albaras of the Arabians. The skin becomes black — thick — & grainy. There are neither pustules — nor tubercles, nor scales nor any thing out of the way on the skin. The body is not in the least emaciated — The breathing is a little difficult, & the countenance has some fierceness in it. They exhale perpetually a peculiar & disagreeable smell, which I can compare to nothing

v This smell mentioned by Dr Thierry con-
with a small modification
tinues in the native African to this
day.

‡ ~~Mr Hawkins takes notice of the~~
~~in his travels into the interior part of~~
~~Africa~~ ‡ They possess the features of the
negro. Mr Hawkins has further described them
in the following words. "Their hair &c
p: 116 - also 117-118. — This artifics smell
does not stop here — the idea of its being a
disease, and its specific nature did not
escape him — hence he adds — "This
~~whiteness of the~~ world whiteness of the skin is com-
mon in Java, Panama where it is perpetuated thro' many
generations. o
frequently occurs
a diversity
~~changes~~ equally great in the symptoms
of many other diseases. The same state of
malignant bilious fever is often marked
by opposite colors in the
by ~~black and white~~ stools — by opposite

but the smell of a mortified limb!" —

~~2 The~~

2 ~~This~~ The leprosy is described in the old testament by ancient writers as imparting a preternatural whiteness to the skin. This whiteness is sometimes universal in spots, & again it extends over the whole body. Persons thus marked have been called albinos. ~~The negroes in many parts of the world~~ ~~blotched~~ It sometimes appears ~~mixed~~ with black ~~often exhibits these phenomena~~ spots. A picture of a negro in Virginia ~~mentioned~~ ~~Hawkesworth in his voyages &c~~ ~~in whom this mixture of white & black~~ ~~in tissues of them~~. M. Peale ~~who~~ had taken place has been happily preserved by ~~preserved~~ in his museum. ~~The picture~~

~~of a negro with white spots on his~~ ~~lips. — 3 The leprosy is attended with big~~ ~~lips flat nose &c~~ —

3 The leprosy induces a morbid insensibility in the nerves. In countries where the disease ~~is common~~ prevails it is

temperature of the skin, & by opposite states of the alimentary canal."

The original connection of the black color of the negroes with leprosy is suggested by the following fact extracted from Bougainville's Voyage &c

common to say ~~that~~ that a person
devoid of sensibility has no more
feeling than a leper. I formerly
mentioned a fact from Dr Moseley
of the indifference with which negroes
submit to operations in surgery in
the West Indies. Even in this country
the negroes have been observed to handle
fire without an emotion, and to eat
suffering from it like white people.
Lepers are remarkable for having
strong venereal ~~diseases~~ diseases. This is
universal among the negroes. — hence
their unconquerable fruitfulness when they are not
depressed by slavery. Even slavery

does not subdue the appetite, for after whole days spent in hard labor in a hot sun in the West Indies we are told the negroes will often walk five or six miles to comply with a venereal assignation. —

5 The big lips & flat nose are symptoms belonging to the Lepromy. They are taken Notice by all Authors. I have more than once seen them in the Pennsylv: hospital. —

6 The woolly heads of the negroes cannot be accounted for from Climate — Diet State of Society, or bilious diseases — for all those causes which combined have not produced it in the natives of Asia or South

who inhabit similar latitudes.
America, wool is peculiar to the
negro. ~~Now~~ There are proofs of similarity
of the ~~Leprosy~~ symptoms of Leprosy, and
of the peculiarities in the negro body
fail me — but there is one fact in
the history of the Leprosy that may
throw some light upon it. The Tricho:
=ma or plica polonica so common
formerly in Poland ~~in~~ was a symptom
of Leprosy. It affected the hair only,
in a peculiar manner. From this
fact it would seem that the Leprosy
had found its way to ~~that part of the~~ the covering of the
head in negroes
~~body~~, & from the variety of its effects
on the skin, it is as probable it may
have produced a ~~[illegible]~~ wool in

note

It ~~affects~~ before it appears
as in a family in Madura;
a Lady of a Dyboro family married,
- all her Children took the disease
at 16 & died. Her husband then
took it & died, & finally the disorder
appeared in herself - of which
she died.

this case as matted hair in the case of the Poles.

But how shall we account for the long duration of this Colour of the skin this so many generations & even ages? I answer; that the Leprosy is the most durable disease in its descent to posterity, & the most indestructible in its nature of any disease we are acquainted with. Dr Jackson Dr Foil says it often disappears in two — and appears in the 4th generation — But 2 by no more happens here than what happens to many nations who ~~generations~~ are distinguished by a peculiarity of figure of any part

of the body. The ~~ancient~~ Scotch people who inhabit the Highlands, have the same ~~color~~ ~~colored~~ red hair & the same high cheek bones which are ascribed to their ancestors by Tacitus ~~[illegible]~~ after the Invasion of Britain. ~~The~~ Even the tumors in the throat in the Cretins who inhabit the Alps are transmitted from father to son this a long succession of generations. Baldness & consumption in like manner are hereditary in many families ~~and~~ both of which occupy parts of the body much more liable to change by successive generations, than the skin.

~~Should it prove~~ Should it be said that ~~the~~ no infectious quality exists

V But it is infectious - white women become dark col.d after sleeping long with black men, more especially if they have children by them. Of this I have heard of two instances, the one in Pennsylv.a - the other in N Carolina.

in this color of the African negroes, & known that this is the case with the Disease at present in many parts of the world. It has ceased to be communicated by contact. ✓

Should it be said that the negroes are as healthy & long lived as other people — I answer — that no local diseases of the skin affect the general health of the body, or the duration of human life. Dr Shirley says that the Plica was very common in Astrachan & speaks with surprise of the longevity of many people who were affected w: it. In the negroes who are now in this country, perhaps it w:

∴ The Color in the negroes is seated in the Rete mucosum. —

be proper rather to consider the black color as an effect of an evanescent disorder. The existence of a solitary symptom of a disease after the disease is cured is no uncommon thing. ~~in the~~ A dark color often continues many days on the tongue after the cure of a bilious fever, & the red marks often appear on the skin many months after the recovery from the small pox.

The theory I have endeavoured to establish leads to two very natural reflexions. 1 That all the claims of superiority of the whites over the blacks on the² of their color are found in ignorance & inhumanity. If

√ equality of mankind.

3ly Is the black color of the negroes a disease,? ~~and are all diseases curable~~?

— then let humanity & science combine their strongest efforts, & endeavours to discover a remedy for it. Nature has lately unfurled a banner upon this subject. ~~& invited us to her~~ ~~Standard~~ She has ~~professed~~ began several spontaneous cases of this disease of the skin in several black people in this Country. In a certain Yankee who lately travelled thro' this city, and was exhibited as a fine boy money, the case was nearly com=plete, The Change from black

the color of the negroes be the effect of a disease, instead of inviting us to tyranny over them, it should entitle them to a tender portion of our humanity, for disease all over the world has always been considered as the signal of compassion. —

2 ~~If~~ The theory I have delivered should leads us, as persons of a different skin, the necessity of keeping up that ~~an~~ prejudice ~~a separation~~ against ~~a mutual~~ such connections with them as would tend to infect posterity with any portion of this disorder. ~~to~~ This may be done upon the principle I have mentioned without offering any violence to humanity, or calling in question the original descent and natural

to a natural white flesh color began about 5/4 years ago at the ends of his fingers, and has extended gradually over the greatest part of his body. The ~~pivot of the~~ which formerly perforated the Cuticle in this man has been changed into hair. — No change in the diet, drinks, dress, employments or situation of this man, had taken place previously to this change in his skin. — But this fact does not militate against artificial attempts to dislodge the color in negroes, any more than the spontaneous turns of many other diseases militate against the use

of medicine in the practice of Physic.

To direct our ~~inquiries~~ & experiments upon this subject, I shall throw out the following facts.

1. In fainting ~~sweats~~ sweats, the colour was first discharged from the skin in three blacks ~~first~~ on which there was most pressure from the stinking, or attrition from labor, as on the trunk of his body, ~~& thighs~~, and on his fingers. The destruction of the black color was probably occasioned by the absorption of the coloring matter of the rete mucosum, or perhaps by the rete mucosum itself, for pressure & friction it is well known aids the absorbing action of the Lymphatics in every

part of the body. — It is from the latter cause, that the palms of the hands of negro women who spend their lives at a washtub are generally as fair as the palms of the hands in laboring white people. —

2 Depletion whether by V.S. purging, or abstinence has a certain effect in lessening the black color in negroes. Many facts induce me to believe, I used as an alteration med. it w[illegible] cure leprosy.

3 A similar change for a more temporary nature has often been observed in negroes from the influence of fear. —

4 Dr Bedoes tells us that he has discharged the color in the black

in them produce a large portion of happi-
ness in the world. we shall 1 destroy
one of the arguments in favor of the
~~Cruel~~ enslaving the negroes, for this
Color has been imposed by the ignorant
to mark them as objects of ~~divine~~ ~~the~~ divine
~~divine~~ misery ~~from the~~ judgments, ~~of heaven~~
~~judgments~~ ~~[illegible]~~ & by the learned to qualify them for con-
=stant labor in hot & unwholsome
climates. 2 we shall add greatly to y:
happiness, for however much they pre-
=tend to be satisfied with their Color there
are many proofs of their preferring that
of the white people.
3 we shall under the belief of the
whole human race being descended
from one pair, ~~but~~ more easy, &

blood of negroes by infusing it in a
oxygenated muriatic acid, & lapsed it in
by the same means in the hand of a
negro man. see Dr Mitchill's fact p. 120

5 ~~A citizen of Phila Who~~ A citizen
of Philad^a upon whose veracity I have
perfect reliance assured me that he had
one seen the Skin of ~~the~~ one side of the
Cheek inclining to the Chin, and of
~~that~~ part of the hand in a negro boy
changed ~~in the bones by his eating~~
~~oranges~~ ~~of~~ by the juice of unripe peaches
(which he was very fond
of eating) falling & resting frequently
upon those parts of ~~the~~ his body.

To encourage attempts to cure
this disease of the Skin in negroes, let
us recollect that we shall by succeeding

universal, and thereby not only add weight to the Christian revelation, but remove a material obstacle to the exercise of ~~its~~ that ~~divine precept, the~~ universal benevolence which is inculcated by it.

V ~~Old age~~ Old age is the effect of such a decay ~~of~~ or loss of the sensibility & contractility of the body, as to render it incapable of ~~emitting~~ receiving & propagating the motions of life. ~~This~~ Such is the change in this respect induced on the solids, that ~~they~~ some of them viz: the arteries are sometimes converted into bone. Excitement & exit? are both exhausted in old age, and death from old age is nothing but a general palsy. I said formerly it began first in the eyes, & sphincter of the bladder.

~~Causality of Death.~~

I intended to have proceeded in the history of ~~all~~ the proximate causes of other cutaneous diseases, and of all local diseases, that are set down in our syllabus, but our time for lecturing being expired, I ~~was~~ am unable to enter upon them. I have kept back of my principles in medicine from you - and if no one these have been ~~well~~ understood, they will enable you with the help of books to account for the all the diseases that are omitted in our lectures.

~~I shall to~~ To the Signs of Diseases I spoke fully in the prognosis of fevers.

I shall only ~~select for now the~~ inquire into the proximate cause of old age & Death. ~~local diseases - those of the mind, afterwards, close with an acc.^t of the proximate cause of Death.~~ —

In practice of Physic Lect 12. —

On the Cause of Death.

We have spent some time in inquiring into the history of the body in its healthy & morbid states - with a single view to cure its diseases, and thereby to elude the premature attacks of death. — But in spite of all that our Science or Art can do, we are still unable to arrest the ravages of this great destroyer, in Infancy - Childhood - youth - and middle life. It is true - we have been able to limit the number of his conquests by the discovery & use of many valuable remedies - and I look forward with hope & confidence to the time, when the more improved states of Science,

reason & religion, shall either prevent, or cure all the diseases which now clude our skill, and thereby render death from old age the only Outlet of human life. —

Yours first inquiry upon this subject shall be — what is the final cause of death? — why has it been made necessary for our bodies to undergo a dissolution & mingle again with its parent earth? — It belongs to the Divines to assign moral reasons for this catastrophe of our bodies. I shall only assign a rational reason for it, — ~~It would seem~~ that our bodies derived from the fall of man the seeds of all the disorders which now infect & distress it. They resemble

~~Therefore~~ an old and tottering house which cannot be made tenable by any repairs. The divine Architect therefore like a wise builder, takes it down altogether ~~in order~~ to order to refine & purify its materials, and afterwards to rebuild it in a new and more durable form. Let us ~~cease~~ therefore to deplore the death of our bodies. Even this must terrible as it appears is the effect of divine wisdom & goodness. (at present)

Life I have said ~~consists in~~ ~~may be~~ ~~nor~~ ~~breathing breathe~~, is the effect of stimuli acting upon animal matter. Death is therefore nothing but such a change induced by disease or old age on the body as to prevent this matter exciting the motions of life. No more happens to the body by death than happens to a Violin

when its strings are too much relax=
=ed – or stretched – or broken. This de=
=struction of the capacity of the body
to emit life by disease is produced 1 by
the abstraction of the stimuli which
support it, particularly of food by
famine, & of blood by hæmorrhage.
~~This~~ no more happens here than
~~what~~ occurs in
the abstraction of the bow of a violin,
destroying the further emission of sound.
Death is produced
2 By the excessive force of stimuli of
all kinds. no more happens here 4:
occurs from too much pressure on the
strings of a violin preventing the emission
of a musical note, or from its strings
being overstretched.
3 – By ~~the~~ too much relaxation.
– no more occurs here, than occurs in
the extinction of sound by the total

relaxation of the strings of the Violin.

4 By an error in the place of certain fluid or solid parts of the body. As more occurs here that would cover from firing the strings of the Violin on ~~the~~ its body ~~of the~~ without the support of the bridges which raise it an inch from that body.

5 By the ~~convulsion~~ action of certain vitiated fluids upon parts of the body which emit vast forcibly the motions of life. As more happens here, ~~that~~ what is produced by ~~firing a piece~~ enveloping the strings ~~of heap~~ of a ~~piece~~ violin in a piece of Wax.

6 By wounds & ~~contusions~~ the solution of solid parts of the body. As more occurs here than when the emission

The convulsions & preternatural strength which sometimes precede death, are the effects of the unequal action ~~effects~~ of stimuli ~~acting~~ upon the remains of the natural ~~partial~~ excitability of the system.

In short —

No more happens to the body from the destruction of its consistency & cohesion than happens to a loadstone which when broken to pieces ceases to possess the usual qualities of a magnet.

The premature dissolution of the body by death is generally accompanied by

of sound is prevented from a Violin, by cutting its strings. —

& lastly death is produced by Rigidity and even an Ossification of the Solids. Death from old Age arises from this Cause. — The Solids here refuse to yeild to the impressions of Stimuli from within & from without. No more happens here that would happen, if a Stick — or a piece of Iron were placed in the room of Cat gut upon the body of the Violin. —

Death then Quit is nothing but from a variety of causes an ~~inability or~~ incapacity in Animal matter to receive, ~~and~~ & emit presence the sensations & motions of life. —

Here then in quit the human body — ~~cold~~ pale — motionless — ~~pale~~ — cold — and

pain, but there many exceptions to this remark. This I took notice of it formerly, and added that I believe death often came on like sleep with pleasurable sensations. ~~The~~ Nature & seat of a disease has a great influence upon the pain of dying. Death from Diseases of the bowels is ~~free~~ perhaps ~~the worst~~ more painful than ~~for~~ when it is seated in any other part of the body. The marquis of Miribeau who died of an inflam^n in his bowels declared that he "felt in a moment the pangs of a thousand years". Next in pain is death from a disease in the ~~bladder & bed~~ kidneys & bladder - then the head - ~~a lastly~~ last of ~~of~~ all ~~too~~

tending by putrefaction to a mixture with its native earthy matter. — we are soon to be separated, ~~from each other~~ — never probably to meet again — probably in the exact relation we must stain to each other upon the ~~beato~~ we now occupy in this room. — not so — the particles of matter which compose our bodies. after lying in the grave till the seeds of weakness and disease are totally ~~destroyed~~, eradicated from them, — they shall again be united, and every particle which composes them shall occupy its former place in a new and a ~~more~~ durable form. — The analogies of this revival of the particles of our bodies are so numerous in the works of both of nature

in the Lungs & Liver. I shall hereafter in the Prognosis of fevers describe the symptoms of death, & shall mention the means of lessening or destroying its pains altogether — for this is an essential part of a Course of Lectures on the practice of physic. It has hitherto been too much neglected, from a mistaken idea that the business of a Physician is only to cure Diseases. His business is to lessen human misery in all the forms in which it all ashes the body of man ... I shall only add here that Death from old age is attended with no pain. It

of art, that to a candid philosopher it would not ~~indeed~~ have been ~~deemed~~ a "thing incredible that God should raise the dead", — even tho' revelation had been silent upon the subject. — To a christian, the prospect of the resurrection of the body ~~is calculated to impart barren joy of the strongest pillars of his hope, and to support the dying hope, and to support the~~ the last comfort in ~~afflicted~~ bodily af= ~~mind upon the~~ =fliction. — But to ~~the mind of a~~ Physician, this prospect of a future resurrection is calculated to afford ~~not only~~ a double portion of ~~last pleasure~~ every time ~~the~~ comfort ~~of a Christian, but the triumph~~ he beholds an amiable & virtuous ~~support of a Philosopher~~ patient ~~wrested~~ or crowds of ~~his friends~~ fellow citizens wrested from his hands by disease and death. He considers the triumphs of death in this case, as transitory, and ~~the~~ he looks

comes on with the gentleness of sleep. In a more improved state of mankind, ~~death so~~ necessity is predicted in the Scriptures, death from old age will be universal, and of course the pains which now attend it will be unknown.

The Signs of death - ~~not cold~~ are not a cessation of pulse - ~~or~~ not coldness of the body, not stiffness nor even putrefaction taken separately - but a long continued appearance of all those Signs of death - Haller - De morte

especially putrefaction.

forward to the ~~[illegible]~~ morning of the resurrection when his ~~[illegible]~~ patients and fellow citizens, shall awaken from the sleep of death, pure - healthy - and capable for ever afterwards ~~incapable of having~~ of receiving, and ~~not of an animal but~~ an immortal retaining the stimuli of life. —

With this we close our lectures for the present year. Accept of my thanks for the attention with wh. you have honoured them. I have ~~only to~~ excuse their deficiencies, & ascribe them to the ~~[illegible]~~ difficulty of my subjects. ~~I have not~~ Examine the new principles & practice I have taught you with brevity & candor, ~~and if I have been mistaken in any thing — convince me of my error~~

Before I conclude such of
you I have only to recommend to you
as ~~[illegible]~~ are ~~[illegible]~~ about to take a
final leave of the University, not to
suffer the ~~[illegible]~~ practical duties of
your profession to interfere with the
study of medicine. A Physician who gives
over reading when he enters into practice, will
often be less wise at 50, than at 25! It is in
consequence of having observed how much
Practitioners of Physic are disposed to lay aside
their books, that I have sometimes proposed
that Degrees in medicine should be given only
for a limited time, and that they should be
~~[illegible]~~ ~~[illegible]~~ renewed once in ~~[illegible]~~ seven years
upon an examination,
provided it appeared, that the Candidate had
lost no part of the ~~[illegible]~~ knowledge during that period
which entitled him to his first degree.

I regret that the peculiar difficulties
of my new professorship, and my professional
engagements have deprived me of the
pleasure of a more frequent private
intercourse with you during the Winter.
— I am sure that I should have gained
both entertainment & instruction
from it. I beg you would command
my services at all times. With a
heart overflowing with best wishes
for your prosperity, I bid you an
affectionate farewell.]

However unpopular they may be in this city, ~~they~~ I have had great pleasure in hearing that they have been adop=ted in several ~~some~~ of the West India Islands, and in some parts of Great Britain & Germany. ~~If~~ will be no Objection to them with Gentlemen who know human nature to observe that they are ~~unpopular~~ opposed, ~~for~~ ~~opposed~~ by my Brethren in this city. ~~I~~ One Criterion ~~they~~ these principles pop=ular ~~and the~~ of ~~their~~ being true, and that is, they lead to a more ~~simple, a more humane, the~~ ~~a more~~ successful mode of treat=ing all diseases than any that has been proposed. The Gentlemen who oppose them, have been

forced to acknowledge ~~that~~ the truth of this remark — but they endeavour to lessen the ~~operation~~ influence of it, in favor of my principles, by asserting, that ~~by~~ from a strange dis=tribution of diseases in our city such as are mild & trifling ~~now employed only in~~ only, fall to my share, while all ~~the~~ difficult and incurable dis=eases all fall to the share of my Brethren. Your Jent: can contradict this ~~calumny~~ assertion. You have seen the most acute cases of Pneumony — yellow fever, Epilepsy — Dropsy, ~~and~~ Contusion of the brain & pulmonary Consumption also the most obstinate cases of intermittent fever all ~~cured~~ completely, or nearly cured by Remedies, which have

been the result of the principles which I have been taught in my ~~I have taught in these words~~. ~~Many~~ lectures. As ~~[illegible]~~ the corruptions of ~~the~~ modern governments have rendered ~~the~~ an opinion universal, that political revolutions have become ~~are~~ necessary & inevitable; so the ignorance, errors, fraud, ~~and~~ imposture ~~&~~ impudence & murders, which prevail every where in medicine, have rendered an opinion ~~[illegible] can with equal~~ nearly as universal, that ~~[illegible]~~ a revolution ~~is~~ is equally necessary & inevitable the principles & practice of Physic.

~~whether~~ This arduous business has already been commenced in this city by ~~in the hands of~~ a few men. The pillars of ancient prejudice in medicine have already been shaken, but whether the great fabric of error & falsehood shall be overturned,

and a simple republican temple of medicine be ~~be~~ erected in its room, depends wholly upon the new principles & practice which have been taught here ~~here~~, being adopted and persisted in other parts of the United States. ~~There they must languish, for a while, for reasons that are too obvious to be mentioned.~~

To encourage us to persevere in this enterprise of humanity, let us recollect two things. 1 That industry in acquiring & candor ~~in acquiring~~, ~~&~~ ~~have~~ in communicating knowledge, will supply the place of splendid abilities, and 2ly that ~~divine~~ the supreme Being

in conveying[53] new & important ~~knowledge generally, and of use & usefulness~~ instruments blessings to mankind, frequently makes use of the weakest, and most unworthy instruments for that purpose, in order that the ~~honor~~ gratitude & praise due for these blessings may be wholly his own.

go back to 532 - opposite side. —

V Under this gent: I shall introduce not only an explanation of the causes of the signs of diseases, but make such inferences ~~up~~ from them upon the probable issue of a disease in as have, they the result of my own life or death. The prognosis in diseases observations.
is by no means a part of the duty of a Physician. It ~~was~~ crept into medicine when the profession of ~~a~~ the Priest, & the Physician were united together. The

Of the signs of disease —

1 as they appear in partial debility, direct & indirect.

I need hardly name these signs of debility. They are an inability to perform ~~the~~ motion. I exclude pain in motion or exercise from debility, for pain is always the effect of morbid excitement. The signs of debility whether direct or indirect are so exactly the same, that they can only be distinguished by taking into consideration ~~the~~ its causes — and the habits it attacks. its stages ~~of the disease~~

when these circumstances are attended to there will be no danger

V ~~The pulse~~ Debility the is by no means the sign of danger. We see it in the beginning of ~~[illegible]~~ diseases from oppression in which the System is strongly impregnated with excitability. It is sometimes attended with danger in the close of acute diseases. Many people die of debility preceded, or after the removal of the disease w^h created it. It is of consequence to know this, in order to prevent death by obviating it. —

+ Having ~~spo~~ spoken of the connection of the pulse w^h the Arteries, & ~~[illegible]~~ of the feeble of Diseases in them, & so on — &c

of mistaking them.

The debility is partial in most cases affecting some one of the systems more than another. The morbid excitement ~~also~~ generally follows in that system only which has been exclusively debilitated. Even when all the systems have been debilitated, morbid action takes place in but a part of them upon the application of exciting causes to them. Remember always disease is local.

2 Of the signs of diseases in the pulse.

① The blood vessels occupy the highest rank in point of utility & ~~importance to the body~~ ~~vessels, & distribution~~ in the human body. It is highly proper

therefore to seek for the signs of health and life in them above every other part of the body. The ~~pulse is to the~~ pulse ~~blood vessels~~ not only indicates the state of the blood vessels, but from their intimate connection ~~of~~ with all the other systems, it indicates more or less all ~~its~~ their morbid affections. In short, the pulse is to the body what the dial plate & hands are to a watch. It tells us nearly all that is going forward in the body. It is the above all other signs ~~the~~ of a measure of diseases. Physicians have often been distinguished by their predilection to particular symptoms by which they judge of the state of the system.

+ In our one introductory lectures I mentioned the difficulty of relying upon any one of them. [repeat them]

V It is somewhat surprising that Hippocrates & Celsus knew and say so little about it. Galen was the first Physician among the Ancients who attended to it.

~~These are some been, & these are~~
for some have chosen the ~~tongue~~ tongue,
some the respiration, some the
countenance & some the excretions
of Urine, fæces & sweat. ~~Urine~~ my
~~system~~ mode of practice rejects none of these signs,
but it fixes ~~with~~ its principal
attention upon the pulse. ~~my~~ my
pupils therefore I hope ~~like the~~
~~for while the~~ ~~[illegible]~~ of
will be known every where by this
knowledge & predilection of to the pulse
in forming a judgement of diseases.

~~The~~ In further considering this subject
I shall 1 mention the facts which
belong the history of the pulse in
its natural state. 2 I shall mention

V The pulsations in this natural state of the pulse in point of frequency, are ~~fast~~ equal intervals - soft - open but vigorous, and free from a sense of resistance.

all its morbid states and

3 by Delivers a few directions for the best manner of discovering these states by the fingers.

I – The natural state of the pulse in ~~most people~~ adults in point of frequency in middle latitudes is ~~about~~ between 60 and 80. Its medium is 66.

~~Its force~~ But the following circumstances have an influence upon its & in many instances upon its force. frequency, ~~and its force~~

1 Age. Its from 130 to 140 on the day of the birth of a child. During its first year it is from 108 to 120. During the 2nd from 90 to 108. During the 3rd year from 80 to 108.

It continues at 80 to 108 during the 4th, 5th & 6th years of its life. In the 7th year it falls from 90 to 72. At, and after 12, it is the same as in adults which is from 60 to 80. In old age, it becomes slow, and intermitting. This is so much the case that a pulse perfectly regular in a very old man is a sign of a disease. The slowness in some cases, descends to 42. 30 & even 26 in some old people, according to Dr Heberden. from 45 to 50 it is seldom below 78 according to Haller.

2 Sex influences the frequency of the pulse — It is always quicker in women than in ~~women~~ men. —

3 Different states of Society, or

+ Dr Dowxion Lavaise a physician lately from Tridid ad informed me (July 24. 1807) in ~~last~~ Summer of 1807, that the pulses of the Indians on that Island, and on the Coast of South America, were uniformly less frequent, than the pulses of the white inhabitants of those Countries. In the former it from 55 to 60 - in the latter from 65 to 68 in a minute.

\+ ~~xi M'Clymer's report~~ The same result took place in the State of Georgia in a number of exp[s] made at my request by Mr Clymer of this city upon the pulses of a number of Indians. They were it is true higher than 60, but less frequent than in the traders who lived among them - and still less frequent than in the civilized people who attended the treaty wth Col: Hawkins - found it at 40 in many ~~exp~~ - these facts deserve to be remembered for ever he made upon them. +

Volney has contradicted it in his View of Louisiana & says falsely Dr Barton was present at ~~any~~ the exps ~~upon~~ from which I related. Dr examined the pulse of an Indian Chief only, ~~who had~~ ~~whose habits~~ who lived occasionally among civilized people, & three two years =

of civilization influences the pulse.
It is slow in all savages, who want
~~not~~ the stimulus of thought & labor
to act upon their bodies. In
in this city
8 Indians out of 14 in an experiment
~~In 1793 I made the pursuit of 6 students of medicine~~
I made ~~a few years ago~~ I found,
~~in Dr Rush & Dr Caldwell~~
the pulse beat ~~on~~ but 60 strokes
in a minute. ~~In~~ One of the ~~persons~~ Indians
in whom it was more frequent,
had been sitting by a fire, and the
other I found afterwards was the
son of a Frenchman, by an
Indian mother. ~~◎~~ go to 1. of new
writing.
~~Country~~ The inhabitants of
the country whose minds are

V It is quicker in a warm, ~~climate~~ than in a temperate & cold climate, & it is quicker in new comers in the W Indies than in old inhabitants, — and in newly imported, than in old slaves under equal circumstances of age. Eg: In a white new comer, in Demerary — the medium state of the pulse (cæteris paribus) in a heat between 90 & 100 is 82 — In an old settler 90 — in a newly arrived slave 88 — in an old slave 82 — according to Dr Chisholm vol II. p 468.

but little excited by constant business, news, and conversation ~~than the inhabitants of large towns~~ ~~the pulse~~ hence slower, rarer than the inhabitants of large cities. — I wish these experiments could be extended to different nations, & ~~dif~~ to all the different occupations of men.

4. Size influences the frequency of the pulse. It is ~~more~~ quicker in short, than in tall men. In very large men it has been observed to be but 55. Hallers.

5. Climate & season influence the ~~It is about 100 in the~~ frequency of the pulse! It is slower in a ~~the~~ cold climate than a warm one. In Greenland it is seldom above 40. It is slower in winter, than West Indies

~~see Chisholm vol. 4 p 468~~

=When at home upon ordinary diet. In this man he says his pulse was as quick as his own, — This I dare say was true. I perceived the same thing in several of the Osage Indians who ~~lately~~ in the year 1804 visited this city, but it was after they had had their Senses acted upon the new sights & sounds & smells of our city ~~& their~~ for several days, & their ~~bodies~~ blood vessels excited by an unusual quantity of cordial Aliment & drinks. +

our exaltd state of the System. This was ~~is~~ the case ~~in~~ on Mr Clymers experiments upon the Indians. In a ~~case~~ person in whom it was 64 at 7 o'clock 76 mid 78 6 p.m. In another 52 7 o'clock 65 mn 56 – 6 p.m midday In a third 67 7 o'clock 76 mid: 72 6 p.m midday.

+ In this ordinary & natural state, the fact I believe is uniformly true. I shall say presently that the exercises of the Understanding & of the passions affect the pulse; now as the Understandings & passions of Indians are ~~seldom employed~~ generally in a quiescent, or torpid state from the limited number of subjects which occupy them, & those subjects only for a short time, it is no wonder their pulses are slower, or less active, than the pulses of civilized people.

in summer. It even varies ~~in~~ with the increase of heat & cold in all the months of the year. 6 Different times of the day influence the frequency of the pulse: ~~for is~~

It is slowest in the morning - increases till mid: day - is stationary till 2 o'clock, - when it descends till 8 o'clock, - then it rises a little. It is again reduced in sleep, - but rises ~~again~~ in frequency till two hours before morning, when it again descends till 7 o'clock - ~~After which it rises~~ at which hour it is ~~descends & is~~ at its greatest weakness, ~~at 7 o'clock~~ from it. It gradually rises till twelve or midday, & thus performs the same revolutions every Day. I shall hereafter say these changes in the pulse in the night are influenced by a difference in the weight in the Air - as discoverable by the Barometer.

turn up this paper

~~see this Lecture vol. 4 p. 468~~

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an excited state of the Systeme. This was ~~in~~ the case ~~with~~ in Mr Clymers experiments upon the Indians.

In a ~~case~~ person in whom it was 64 a 7 o'clock 76 mid 71 6 p.m. In another 52 7 o'clock 65 m. 56 – 6 p midday In a third 67 7 o'clock 76 mid: 72 6 p.m. midday.

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7 ~~Light has a great influence upon the~~ The pulse ~~odd~~ increases and lessens with different degrees of light and darkness. It is great consequence to attend to this fact in judging of a disease by the state of the pulse, and in prescribing for Diseases particularly those of a febrile nature. Light and darkness are both hurtful & useful according to the state of the system in which they are applied. I shall hereafter explain certain phenomena in the body ascribed to human attentions, chiefly to the effects of light & darkness upon it.

~~Barom~~, and ~~Opera~~ cording to Dr Haller, there is a difference of ~~beats~~ between the morning & evening 1413: 65 & 80 In ~~some cases there is a diminution of frequency at night for~~ It differs as to frequency in the sleeping, & waking states. It is ~~much~~ from above in the morning or vigilius of the mind & light & lowest in sleep. It is from 80 to 90 After ~~before~~ waking, but soon falls to 70 & below it.

B. Different positions of the body affect the frequency of the pulse. It is slowest when we lie on our backs – It is quicker when we sit

11 + Food and drinks affect the pulse. It is quickened by a full meal, and by distilled & fermented liquors. It is reduced in its frequency by fasting. 120

V 10 Different positions of the arm affects the pulse. It is much reduced in frequency by facing uncovered, and by the pressure upon the body upon it in bed, when the patient lies on his side. + see above

12 O Exercise quickens the pulse ~~from 70~~ a pulse which 64 in a person while sitting is 68 when standing ~~to go 8 ft in walking~~ 78 walking at the rate of 3 miles an hour - 88 when walking four miles an hour from 140 to 150 when running. 120

15 Pregnancy influences the pulse. It is more active than natural as soon as conception

up, and quickest when we are in an erect posture.

The exercised of the Understanding & of certain ~~all the~~ passions of the mind affect 12 the pulse. The stimulating passions Eg Anger increases to 104 strokes in a minute. ~~in~~ impart quickness & force to it. The simply ~~debi~~ sedative passions as grief, fear do reduce it in frequency & force, provided it be felt before ~~other~~ it is accelerated by stimuli acting upon ~~accumulated~~ the excitab.y which has been accumulated by those debilitating passions. go to 1. new writing ~~The pulse — O.~~

~~(12) 13. Consideration quickness~~

20 ~~13.~~ It belongs to the natural history of the pulse to take notice, that in some persons in good health, it is preternaturally slow Exm Clippole

takes place, ~~and this~~ activity is increased at the times in which the menses ordinarily flow. ‡ ~~and in pregnant women as well as others.~~ ‡ such a pulse ~~is marked~~ indicates a ~~high~~ fever at 60,

‡ In the Revd Mr Clayton of Liverpool it was at 100 - until he had a severe fever - case after wh it was between 60 & 70. Dr Whyt mentions a person in whom it was 120 in its natural state. In a fever in this person it was 180 even when convalescent it was 140 when lying & 220 when in sitting posture. ‡ It is frequently perceived with difficulty in very fat people from fat compressing, or burying the artery.

(a) a kind provision of the author of nature! — we see external diseases, but internal ones are concealed from us.

16 ‡ Plantain and P: influence the state of the pulse - as Opium - Bark - Blisters - the last according to parts to which they are applied. See Bordu. Vol 2 p 22. 1 ~~18~~ a Cough 18 Year

turn over to ~~no~~ 07

549

I have read of its total about 548 & with good health
but 407 In others it is preternaturally
quick [Mr Peters 100] In some the
artery we commonly feels, runs
above the Radius parallel with the
thumb. It is of consequence to know
these variations from nature, when
they occur in our habitual patients.
Indeed a great advantage would
arise from knowing the exact
state of the pulse in every patient we attend
in its ordinary & healthy state.

II. We come next to inquire into
the morbid states of the pulse. Put
~~548~~
It departs from order and health,
1 In frequency, and quickness. By
frequency is meant the number of

†This subject ~~has~~ in another place; at present I shall only ~~remark~~ repeat that the sympathy ~~with~~ between the pulse & diseased parts is ~~in~~ not with exact spot diseased, but with the parts contiguous to it. In Inflam^n: ~~for~~ I shall say hereafter the ~~mo~~ circulation is slower than in healthy parts. It even ceases altogether in some cases. ~~The~~ This has been observed by a microscope. The increased action is a tergo, or ~~by~~ behind the inflamed part, & it is this action which produces corresponding morbid actions in the radial artery. The absence of it produces what has been called passive or asthenic inflam^n: — It is absent in all those cases in which we find signs of inflam^n after death, without previous fever, or morbid action in the pulse. —

Let not ~~the~~ exceptions that have been mentioned to the Unison in the pulsations of the arteries call in question the advantages